

a native of Europe, and can scarcely be said even to be naturalized in the British Islands.

Besides the places I have mentioned where it has been seen growing, Mr. Babington states that it was found by Mr. Polwhele on the cliff above Falmouth Harbour; and I learn that there is a specimen in Sir William J. Hooker's herbarium at Kew, sent from Helston, a few miles from Falmouth, by Mr. C. A. Johns.

Glasgow, Oct. 13, 1860.

### BIBLIOGRAPHICAL NOTICES.

*Gatherings of a Naturalist in Australasia: being Observations principally on the Animal and Vegetable Productions of New South Wales, New Zealand, and some of the Austral Islands.* By GEORGE BENNETT, M.D., F.L.S., F.Z.S. &c. 8vo, London, Van Voorst, 1860.

LITTLE more than seventy years have elapsed since the foundation of the British colony of New South Wales. At the period of its establishment, and for many years afterwards, scarcely anything was known in the mother country of the vast island on the shores of which this almost infinitesimally small settlement had been made. Even its coast-line was only made out imperfectly by numerous voyages of discovery; and the condition of its interior has been ascertained within the last few years. But such are the capabilities of this New World, such its adaptation to the production of all the necessaries and most of the luxuries of a highly cultivated state of society, that within this short period—indeed, within the memory of living men—it has advanced from a very unpromising origin to be the most important of our colonial possessions, affording a home and an easy subsistence to so many thousands of our countrymen, that it is hard to find in the old country any one who has not some connexion amongst its inhabitants.

Parallel with this material prosperity, our knowledge of the natural productions of Australia has also advanced rapidly. Scientific expeditions have been sent to explore the coasts and the recesses of those parts of the continent not inhabited by white settlers; private collectors have zealously done their part of the work of discovery, and some of the first botanists and zoologists of Europe have devoted themselves to the task of describing the materials thus collected. Upon the Birds and Mammals of Australia we have in this country two splendid works from the pen of Mr. Gould, who himself undertook a voyage to the Antipodes for the sake of observing his feathered favourites in their native haunts. The sea-weeds of the Australian coasts have also found an able expositor in Prof. Harvey; and of many other groups, both of plants and animals, we possess more or less accurate details.

But the majority of the works in which these particulars are to be

found are scarcely available to any but the professed naturalist; and we know of no work professing to give a sketch of the ordinary natural productions of Australia, for the use of the general reader, such as Dr. Bennett has furnished in the book before us. A residence of nearly thirty years in New South Wales, interspersed only with occasional voyages, principally in the Australasian Seas, during the whole of which he appears to have been constantly engaged in the acquisition of zoological and botanical information, may be regarded as giving him some right to speak with authority upon the natural history of his adopted country; and the value of many observations upon the habits of birds and other animals, for which we are already indebted to our author, will confirm this right in the eyes of the scientific naturalist. In fact, several of the most valuable and important zoological chapters of the present work have already been communicated by the author to the Zoological Society: such are those on the *Ornithorhynchus*, the Mooruk, and the Australian Jabiru.

Passing over Dr. Bennett's account of marine animals observed on his voyage to Sydney, we find that the first actual step into the zoology of Australia is made by his observations upon that most anomalous of all vertebrate animals, the *Ornithorhynchus*. Indeed this seems to have been one of the first objects to which he directed his attention on his arrival in New South Wales, when we find him setting out in pursuit of the "Mallangong" (as it is termed by the natives) with an energy which astonished those dusky gentry, who could not understand why the "white feller," with plenty of cattle and sheep at his command, should take so much trouble to get an inferior article of food. Dr. Bennett's account of the *Ornithorhynchus*, of which he had several specimens alive, forms one of the most interesting chapters in his book.

The descriptions of the manners of the Australian Jabiru (*Mycteria australis*) and of the Mooruk or Cassowary of New Britain in confinement, are likewise highly interesting. For the discovery of the latter bird we are indebted to Dr. Bennett; and his name has deservedly been handed down to posterity in its scientific denomination of *Cassuarium Bennetti*. Besides these, we find brief notes on numerous other birds of Australia and the neighbouring islands, such as the Albatrosses, Tropic-Birds, Frigate-Birds, Petrels and Gulls of the coasts, and the King-fishers, Cuckoos, Lyre-Birds, Honey-eaters, Bower-Birds, Pigeons, and Parrots of the interior. And, in connexion with these, Dr. Bennett calls the attention of his fellow-colonists to the effects of the wanton or ignorant destruction of the feathered inhabitants of the countries in which they have taken up their abode, pointing out, as has frequently been done (we fear with very little effect) in this country, not only that many interesting birds are now nearly exterminated in regions where, not many years ago, they gave animation to the woods and fields, but that, by constantly shooting or driving away birds which we may suppose to be injurious to our possessions, we are in many cases actually destroying our best friends. Even in the case of those birds which are known to be most destructive to the produce of our fields and

gardens, it must always be borne in mind that their attacks upon our property are generally confined to some particular periods of the year, whilst their instincts are constantly prompting them to the destruction of other enemies of our crops, whose insidious attacks can rarely be detected by the husbandman or gardener until after the mischief is done ; so that in this way they far more than repay us for any damage that they may do in their own proper persons. In illustration of his remarks, Dr. Bennett tells us that the Kingfisher, known to the settlers by the not very complimentary name of the "Laughing Jackass" (*Dacelo gigantea*), was "for many years a doomed bird, merely from ignorance of its natural habits ; for, having been seen occasionally to pounce upon and devour a chicken, in the absence of its usual food of snakes, mice, &c., it was regarded as one of the destroyers of the poultry-yard ; and from the general destruction of these birds, a corresponding increase of reptiles and vermin of all kinds was found upon the farms." Subsequently the farmers seem to have discovered their error, and the Laughing Jackass is now unmolested. In a country which abounds in numerous snakes (of which Mr. Bennett gives an account that might almost frighten an intending emigrant) all reptilivorous birds should certainly be protected ; and yet these, as being especially liable to temptation at the sight of chickens when their natural food is not in the way, often become peculiarly obnoxious to the farmer. But, as indicated by Dr. Bennett, even the smaller Hawks will probably be found to do more good in the exercise of their natural vocation than will suffice to compensate for any depredations that they may commit upon our domestic birds. Self-interest is most likely one great cause of the difficulty with which these views are entertained by farmers. A chicken carried off is an actual loss to the individual, but the destruction of vermin is a benefit to the community.

Of the peculiar Mammals of Australia Dr. Bennett gives but few notices. Almost the only reference to the Kangaroos is to be found at page 5, where, after quoting the saying of Charles Lamb, that the small fore feet of these animals seemed to be peculiarly adapted for picking pockets, our author remarks that it should have been added that they have pockets to be picked. "We have often amused ourselves," he adds, "by throwing sugar or bread into the pouch of a Kangaroo, and seen with what delight the animal has picked its own pocket, and devoured the contents,—searching its bag, like a Highlander his sporran, for more." The *Echidna*, the Long-tailed Flying Opossum (*Belideus flaviventris*), and the Flying Fox (*Pteropus*) come in for rather a larger share of notice. Of the second, Dr. Bennett had a living specimen, of which he gives an interesting account. It is now in the Collection of the Zoological Society. Our author also describes a few of the marine Mammals inhabiting the shores of New South Wales, especially the Sperm Whale and the Dugong, the latter of which, he tells us, furnishes an oil possessing the medicinal properties of cod-liver oil, in place of which it has been prescribed by some Australian physicians.

A more important service than even the detection of a new species

of Cassowary was rendered to the science of Zoology by Dr. Bennett at a very early period of his residence in Australasia. "On the 24th of August, 1829," he says, "when walking on the deck of the ship (at Erromanga) on a calm evening, I observed an object floating upon the water, resembling a dead tortoiseshell cat. So unexpected a sight excited my curiosity; and the boat, which was alongside the ship at the time, was immediately manned, and sent to ascertain the nature of the floating object. It was found to be the Pearly Nautilus." And thus Dr. Bennett was the first naturalist, since the time of Rumphius, who had the good fortune to behold a living specimen of this remarkable creature, almost the sole living representative of that great group of chambered Cephalopods whose remains are to be met with in some of the oldest of geological formations. Who cannot enter into the feelings of our author, when the supposed tortoiseshell cat turned out such a prize? or sympathize with his friend, referred to on page 383, who, on inquiring of a native of the Fiji Islands whether he was acquainted with the Nautilus, was coolly informed by him that "he had just eaten one"? It appears, indeed, that all the time that our zoologists have been longing for the opportunity of examining the animal of the Pearly Nautilus, these "ignorant brutes" of islanders have been in the constant habit of capturing and devouring them; and a lady friend of Dr. Bennett's informed him that she was acquainted with a person who was wrecked upon an island near New Caledonia, where he was frequently regaled with *curried Nautili*, which he most unpoetically compared with Whelks.

We have devoted so much space to the consideration of the zoological contents of Dr. Bennett's volume that we have but little to spare for that of the interesting botanical information which it contains. In his fifteenth chapter he describes the curious Australian Baobab-tree (*Adansonia Gregorii*), the enormous gouty stems and comparatively small branches of which give it a most singular aspect. The sixteenth chapter is devoted to the cultivation of the Orange-tree in Australia—a branch of industry which has already made much progress, and which, from the peculiar suitability of the climate, is probably destined to become of great importance to the colony of New South Wales. It appears that it is amongst the orange-groves that the singular Cicada, *Cystosoma Saundersii*, is to be met with, and that so constantly that it is known in the colony as the Orange-locust. We find also descriptions of the numerous species of Acacias, Gum-trees, Casuarinas, Araucarias, and Apple-trees (*Angophoræ*), and of the several Dammara Pines which have lately been discovered both in Australia and the islands of the Pacific,—interspersed with interesting accounts of the districts in which these various trees grow, and the uses to which they are applied both by natives and settlers. The last two chapters previous to that in which Dr. Bennett describes his homeward voyage, are devoted to the consideration of the vegetable productions of New Zealand and Polynesia, with especial reference to those plants which are considered by the natives to possess medicinal properties. Amongst these we have an interesting account of the Kava (*Piper methysticum*), which appears to have some claim

to be considered as a useful remedy in certain cases, and is also used, like the *Amanita* of the Kamtschadales, to produce a certain amount of jollification. Dr. Bennett describes a symposium of this kind in the island of Tongatabu; and from his account of the preliminary operations, in which a general chewing of the Kava was performed by the company *before* its infusion with water to make the cheering beverage, it would appear to be necessary that the partakers of this entertainment should possess almost as little squeamishness as the inferior classes of Kamtschadales.

We must now conclude our notice of Dr. Bennett's 'Gatherings.' We trust that we have said sufficient to indicate that his volume contains much valuable and interesting matter. Although the style in which it is written is somewhat discursive, the general performance of the work is satisfactory, and it may be perused with much advantage both by the general reader and the scientific naturalist. The illustrations consist of several plates, some of them coloured, representing the more interesting of the objects referred to, and of numerous woodcuts scattered through the text.

*The Honey-Bee; its Natural History, Habits, Anatomy, and Microscopical Beauties.* By JAMES SAMUELSON, assisted by J. BRAXTON HICKS, M.D., F.L.S. With tinted Illustrations. 12mo. London, Van Voorst, 1860.

Under the title of 'Humble Creatures,' Mr. Samuelson appears to propose bringing before the public a series of notices of the structure and habits of some of the lower animals; and the present volume is the second effort he has made towards the accomplishment of this design. His object, as explained by himself, is to show, from the minute examination of some of those creatures which are usually regarded as insignificant or even contemptible by the world at large, how even these have been cared for by the Creator, how beautifully their structure is adapted to all the purposes which they are intended to fulfil in Nature, and how important they may be in the œconomy of the world. Towards the attainment of this laudable object he made a first essay some years ago, when he published the histories of "The Earthworm and the Housefly," and we are glad to see, by an advertisement in his new volume, that its predecessor has met with sufficient success to justify the production of a second edition. In selecting the Honey-Bee for his second essay, he has perhaps, departed a little from the precise line which he might have been expected to follow; as the Bee is certainly not one of those "humble creatures" which are regarded with contempt or considered unimportant by even the most superficial; and so much has been written upon this insect and its wonderful instincts, that most people would be ready to admit its history to be a subject of interest. However, it is probably the general interest taken in the Bee that has induced our author to make it the subject of his present volume; and, considering the new and remarkable facts which have lately been discovered in the history of this insect, and which have scarcely yet